

(19)日本国特許庁 (JP)

(12) 公開特許公報 (A)

(11)特許出願公開番号

特開2001-68658

(P2001-68658A)

(43)公開日 平成13年3月16日 (2001.3.16)

(51)Int.Cl.
H01L 27/14

識別記号

F I
H01L 27/14

テ-マコ-ト(参考)
K 4M118
D

審査請求 未請求 請求項の数2 O.L. (全6頁)

(21)出願番号 特願平11-241706

(71)出願人 000002185

ソニー株式会社

東京都品川区北品川6丁目7番35号

(22)出願日 平成11年8月27日 (1999.8.27)

(72)発明者 原田 耕一

東京都品川区北品川6丁目7番35号 ソニ
ー株式会社内

(72)発明者 上田 康弘

東京都品川区北品川6丁目7番35号 ソニ
ー株式会社内

(74)代理人 100080883

弁理士 松隈 秀盛

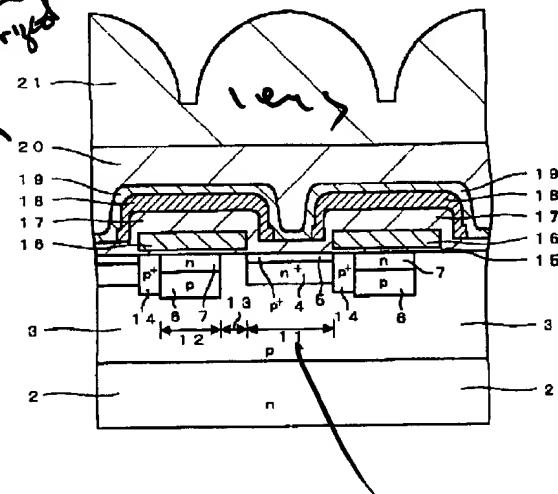
最終頁に続く

(54)【発明の名称】 固体撮像装置及びその製造方法

(57)【要約】

【課題】 紫外線に対して充分な感度を有すると共に各種の特性が良好な固体撮像装置及びその製造方法を提供する。

【解決手段】 センサ部11上のオンチップレンズを含む層19, 20, 21が紫外線を透過する無機膜で形成された固体撮像装置1を構成する。また、平坦化膜となる第1の無機膜を形成しエッチバック又は化学的機械的研磨法により平坦化膜20を形成する工程と、平坦化膜20上に第2の無機膜を形成する工程と、第2の無機膜上にレンズ形状のレジスト層を形成しエッチバックして第2の無機膜によるオンチップレンズ21を形成する工程とを有して固体撮像装置1を製造する。



* NOTICES *

Japan Patent Office is not responsible for any damages caused by the use of this translation.

1. This document has been translated by computer. So the translation may not reflect the original precisely.
2. **** shows the word which can not be translated.
3. In the drawings, any words are not translated.

DESCRIPTION OF DRAWINGS

[Brief Description of the Drawings]

[Drawing 1] It is the outline block diagram (cross section near the sensor section) of the solid state camera of the gestalt of 1 operation of this invention.

[Drawing 2] A, B It is process drawing showing the manufacturing process of the solid state camera of drawing 1.

[Drawing 3] C, D It is process drawing showing the manufacturing process of the solid state camera of drawing 1.

[Drawing 4] It is the outline block diagram (cross section near the sensor section) of the solid state camera of the gestalt of other operations of this invention.

[Drawing 5] It is the outline block diagram (cross section near the sensor section) of the solid state camera of the gestalt of the operation of further others of this invention.

[Drawing 6] It is the outline block diagram (cross section near the sensor section) of the solid state camera of the gestalt of another operation of this invention.

[Description of Notations]

1, 30, 40, 50 A solid state camera, 2 A n-type-semiconductor substrate, 3 P type semiconductor field, 4 n type impurity range and 5 A positive charge accumulation field and 6 a p type semiconductor -- a well -- a field -- 7 A transfer channel field, 11 The sensor section (light-receiving section), 12 Perpendicular transfer register, 13 The read-out gate section, 14 A channel stop field, 15 A gate insulator layer, 16 A transfer electrode, 17 A layer insulation film, 18 A shading film, 19 21 An insulator layer, 20, 32 flattening films, 31 An on-chip lens, 24 Resist layer

[Translation done.]

CLIPPEDIMAGE= JP02001068658A

PAT-NO: JP02001068658A

DOCUMENT-IDENTIFIER: JP 2001068658 A

TITLE: SOLID STATE IMAGE SENSOR AND FABRICATION THEREOF

PUBN-DATE: March 16, 2001

INVENTOR-INFORMATION:

NAME	COUNTRY
HARADA, KOICHI	N/A
UEDA, YASUHIRO	N/A
UMETSU, NOBUHIKO	N/A
WADA, KAZUJI	N/A
TOUMIYA, YOSHITETSU	N/A
MATSUDA, TAKESHI	N/A

ASSIGNEE-INFORMATION:

NAME	COUNTRY
SONY CORP	N/A

APPL-NO: JP11241706

APPL-DATE: August 27, 1999

INT-CL (IPC): H01L027/14

ABSTRACT:

PROBLEM TO BE SOLVED: To obtain a solid state image sensor having good characteristics and exhibiting sufficient sensitivity to UV-rays, and a fabrication method thereof.

SOLUTION: The solid state image sensor comprises layers 19, 20 and 21 including on-chip lenses on a sensor section 11 formed of an inorganic film transmitting UV-rays. The solid state image sensor is fabricated through a step for forming a planarized film 20 by etching or chemical mechanical polishing a first inorganic film, a step for forming a second inorganic film on the planarized